



# STIC Search Report

## Biotech-Chem Library

STIC Database Tracking Number: 123751

To: Christopher Yaen  
Location: REM/3A20/3C18  
Art Unit: 1642  
Wednesday, June 09, 2004

Case Serial Number: 09/538106

From: Beverly Shears  
Location: Remsen Bldg.  
RM 1A54  
Phone: 571-272-2528

beverly.shears@uspto.gov

### Search Notes

Christopher,

This request was not forwarded to Ed Hart. It was placed in the "general pool" of incoming searches. I processed prior to reading CC: addressee.

Beverly

# SEARCH REQUEST FORM

Requestor's Name: \_\_\_\_\_ Serial Number: \_\_\_\_\_  
Date: \_\_\_\_\_ Phone: \_\_\_\_\_ Art Unit: \_\_\_\_\_

## Search Topic:

Please write a detailed statement of search topic. Describe specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples or relevant citations, authors, keywords, etc., if known. For sequences, please attach a copy of the sequence. You may include a copy of the broadest and/or most relevant claim(s).

## STAFF USE ONLY

Date completed: 06-09-04  
Searcher: Beverly C 2528  
Terminal time: \_\_\_\_\_  
Elapsed time: \_\_\_\_\_  
CPU time: \_\_\_\_\_  
Total time: \_\_\_\_\_  
Number of Searches: \_\_\_\_\_  
Number of Databases: \_\_\_\_\_

### Search

\_\_\_\_\_ STIC  
\_\_\_\_\_ CM-1  
\_\_\_\_\_ Pre-S

### Type of Search

\_\_\_\_\_ N.A. Sequence  
\_\_\_\_\_ A.A. Sequence  
\_\_\_\_\_ Structure  
\_\_\_\_\_ Bibliographic

### Vendors

☒ IG  
\_\_\_\_\_ STN  
\_\_\_\_\_ Dialog  
\_\_\_\_\_ APS  
\_\_\_\_\_ Geninfo  
\_\_\_\_\_ SDC  
\_\_\_\_\_ DARC/Questel  
\_\_\_\_\_ Other

[illegible]

US-09-538- 178 DVAFQOSTAKSATWTYSTELKLYCOI AKTCPIQIKMTPPPGAVIRAMPV  
 US-09-538- 139 DVAFQOSTAKSATWTYSTELKLYCOI AKTCPIQIKMTPPPGAVIRAMPV  
 US-09-538- 84 DVAFQOSTAKSATWTYSTELKLYCOI AKTCPIQIKMTPPPGAVIRAMPV  
 US-09-538- 84 DVAFQOSTAKSATWTYSTELKLYCOI AKTCPIQIKMTPPPGAVIRAMPV  
 consensus 184 DVAFQOSTAKSATWTYSTELKLYCOI AKTCPIQIKMTPPPGAVIRAMPV  
 dvafqostaksatwtystelklycoi qngsastakcpidikmtpppgavirampv  
 US-09-538- 64 ALSPSPAIPIENTDYPGPHSPDVSFOQOSTAKSATWTYSTELKLYCOIAKTCPIQIKMTP  
 US-09-538- 64 ALSPSPAIPIENTDYPGPHSPDVSFOQOSTAKSATWTYSTELKLYCOIAKTCPIQIKMTP  
 US-09-538- 119 ALSPSPAIPIENTDYPGPHSPDVSFOQOSTAKSATWTYSTELKLYCOIAKTCPIQIKMTP  
 US-09-538- 158 ALSPSPAIPIENTDYPGPHSPDVSFOQOSTAKSATWTYSTELKLYCOIAKTCPIQIKMTP  
 US-09-538- 137 YKKAHEHTEVYKRCPNHLSRENEGOIAPPSHLIRVEGNSHAQYVEDPITGRQSVLYPYE  
 US-09-538- 137 YKKAHEHTEVYKRCPNHLSRENEGOIAPPSHLIRVEGNSHAQYVEDPITGRQSVLYPYE  
 US-09-538- 192 YKKAHEHTEVYKRCPNHLSRENEGOIAPPSHLIRVEGNSHAQYVEDPITGRQSVLYPYE  
 US-09-538- 231 YKKAHEHTEVYKRCPNHLSRENEGOIAPPSHLIRVEGNSHAQYVEDPITGRQSVLYPYE  
 US-09-538- 231 YKKAHEHTEVYKRCPNHLSRENEGOIAPPSHLIRVEGNSHAQYVEDPITGRQSVLYPYE  
 US-09-538- 192 YKKAHEHTEVYKRCPNHLSRENEGOIAPPSHLIRVEGNSHAQYVEDPITGRQSVLYPYE  
 US-09-538- 192 YKKAHEHTEVYKRCPNHLSRENEGOIAPPSHLIRVEGNSHAQYVEDPITGRQSVLYPYE  
 US-09-538- 137 YKKAHEHTEVYKRCPNHLSRENEGOIAPPSHLIRVEGNSHAQYVEDPITGRQSVLYPYE  
 US-09-538- 137 YKKAHEHTEVYKRCPNHLSRENEGOIAPPSHLIRVEGNSHAQYVEDPITGRQSVLYPYE  
 US-09-538- 137 YKKAHEHTEVYKRCPNHLSRENEGOIAPPSHLIRVEGNSHAQYVEDPITGRQSVLYPYE  
 consensus 245 YKKAHEHTEVYKRCPNHLSRENEGOIAPPSHLIRVEGNSHAQYVEDPITGRQSVLYPYE  
 ykkahehtevkrpcnhlsrefneqgiapshlirvegnshaqyvedpitgrqsvlypye  
 US-09-538- 125 PPGAVIRAMPYKKAHEHTEVYKRCPNHLSRENEGOIAPPSHLIRVEGNSHAQYVEDP  
 US-09-538- 125 PPGAVIRAMPYKKAHEHTEVYKRCPNHLSRENEGOIAPPSHLIRVEGNSHAQYVEDP  
 US-09-538- 180 PPGAVIRAMPYKKAHEHTEVYKRCPNHLSRENEGOIAPPSHLIRVEGNSHAQYVEDP  
 US-09-538- 219 PPGAVIRAMPYKKAHEHTEVYKRCPNHLSRENEGOIAPPSHLIRVEGNSHAQYVEDP  
 US-09-538- 198 PPGAVIRAMPYKKAHEHTEVYKRCPNHLSRENEGOIAPPSHLIRVEGNSHAQYVEDP  
 US-09-538- 198 PPGAVIRAMPYKKAHEHTEVYKRCPNHLSRENEGOIAPPSHLIRVEGNSHAQYVEDP  
 US-09-538- 253 PPGAVIRAMPYKKAHEHTEVYKRCPNHLSRENEGOIAPPSHLIRVEGNSHAQYVEDP  
 US-09-538- 292 PPGAVIRAMPYKKAHEHTEVYKRCPNHLSRENEGOIAPPSHLIRVEGNSHAQYVEDP  
 US-09-538- 292 PPGAVIRAMPYKKAHEHTEVYKRCPNHLSRENEGOIAPPSHLIRVEGNSHAQYVEDP  
 US-09-538- 253 PPGAVIRAMPYKKAHEHTEVYKRCPNHLSRENEGOIAPPSHLIRVEGNSHAQYVEDP  
 US-09-538- 198 PPGAVIRAMPYKKAHEHTEVYKRCPNHLSRENEGOIAPPSHLIRVEGNSHAQYVEDP  
 US-09-538- 198 PPGAVIRAMPYKKAHEHTEVYKRCPNHLSRENEGOIAPPSHLIRVEGNSHAQYVEDP  
 consensus 306 PPGAVIRAMPYKKAHEHTEVYKRCPNHLSRENEGOIAPPSHLIRVEGNSHAQYVEDP  
 ppgavirampy kkahehtevkrpcnhlsrefneqgiapshlirvegnshaqyvedpitgrqsvlypye  
 US-09-538- 186 ITGRQSVLYPYEPPOVGTETTYLVNFMCNSSCVGGMRRPILITVLETRDQVILGRRCF

US-09-538- 186 ITGRQSVLYPYEPPOVGTETTYLVNFMCNSSCVGGMRRPILITVLETRDQVILGRRCF  
 US-09-538- 241 ITGRQSVLYPYEPPOVGTETTYLVNFMCNSSCVGGMRRPILITVLETRDQVILGRRCF  
 US-09-538- 280 ITGRQSVLYPYEPPOVGTETTYLVNFMCNSSCVGGMRRPILITVLETRDQVILGRRCF  
 US-09-538- 259 KADEDSIRKQOVSDSANKGDTGRPRONTHGIOMTSIKKRRSPDDELLYLPVRGETIEM  
 US-09-538- 259 KADEDSIRKQOVSDSANKGDTGRPRONTHGIOMTSIKKRRSPDDELLYLPVRGETIEM  
 US-09-538- 314 KADEDSIRKQOVSDSANKGDTGRPRONTHGIOMTSIKKRRSPDDELLYLPVRGETIEM  
 US-09-538- 353 KADEDSIRKQOVSDSANKGDTGRPRONTHGIOMTSIKKRRSPDDELLYLPVRGETIEM  
 US-09-538- 353 KADEDSIRKQOVSDSANKGDTGRPRONTHGIOMTSIKKRRSPDDELLYLPVRGETIEM  
 US-09-538- 314 KADEDSIRKQOVSDSANKGDTGRPRONTHGIOMTSIKKRRSPDDELLYLPVRGETIEM  
 US-09-538- 259 KADEDSIRKQOVSDSANKGDTGRPRONTHGIOMTSIKKRRSPDDELLYLPVRGETIEM  
 US-09-538- 259 KADEDSIRKQOVSDSANKGDTGRPRONTHGIOMTSIKKRRSPDDELLYLPVRGETIEM  
 consensus 367 KADEDSIRKQOVSDSANKGDTGRPRONTHGIOMTSIKKRRSPDDELLYLPVRGETIEM  
 kadedsir kqvdsd-ksngdgtgrpronthgiomtsikrrspddell ylpvrgetiem  
 US-09-538- 247 EARIACPGDRKADDEDSIRKQOVSDSANKGDTGRPRONTHGIOMTSIKKRRSPDDELLYLPVRGETIEM  
 US-09-538- 247 EARIACPGDRKADDEDSIRKQOVSDSANKGDTGRPRONTHGIOMTSIKKRRSPDDELLYLPVRGETIEM  
 US-09-538- 302 EARIACPGDRKADDEDSIRKQOVSDSANKGDTGRPRONTHGIOMTSIKKRRSPDDELLYLPVRGETIEM  
 US-09-538- 341 EARIACPGDRKADDEDSIRKQOVSDSANKGDTGRPRONTHGIOMTSIKKRRSPDDELLYLPVRGETIEM  
 US-09-538- 320 LKIKESLELMOYLPOHTIETRYQOQOQHLLQKQTSIQSPSSYGNSSPPLNKNKSNX  
 US-09-538- 320 LKIKESLELMOYLPOHTIETRYQOQOQHLLQKQTSIQSPSSYGNSSPPLNKNKSNX  
 US-09-538- 375 LKIKESLELMOYLPOHTIETRYQOQOQHLLQKQTSIQSPSSYGNSSPPLNKNKSNX  
 US-09-538- 414 LKIKESLELMOYLPOHTIETRYQOQOQHLLQKQTSIQSPSSYGNSSPPLNKNKSNX  
 US-09-538- 414 LKIKESLELMOYLPOHTIETRYQOQOQHLLQKQTSIQSPSSYGNSSPPLNKNKSNX  
 US-09-538- 375 LKIKESLELMOYLPOHTIETRYQOQOQHLLQKQTSIQSPSSYGNSSPPLNKNKSNX  
 US-09-538- 320 LKIKESLELMOYLPOHTIETRYQOQOQHLLQKQTSIQSPSSYGNSSPPLNKNKSNX  
 US-09-538- 320 LKIKESLELMOYLPOHTIETRYQOQOQHLLQKQTSIQSPSSYGNSSPPLNKNKSNX  
 consensus 428 LKIKESLELMOYLPOHTIETRYQOQOQHLLQKQTSIQSPSSYGNSSPPLNKNKSNX  
 lkikeslelmoylpohtietryqoqqqhllqkqts-qs-sygnsspplnknsmx  
 US-09-538- 304 YLPVRGETIEMLKIKESLELMOYLPOHTIETRYQOQOQHLLQKQTSIQSPSSYGNSSPPLNKNKSNX  
 US-09-538- 308 YLPVRGETIEMLKIKESLELMOYLPOHTIETRYQOQOQHLLQKQTSIQSPSSYGNSSPPLNKNKSNX  
 US-09-538- 363 YLPVRGETIEMLKIKESLELMOYLPOHTIETRYQOQOQHLLQKQTSIQSPSSYGNSSPPLNKNKSNX  
 US-09-538- 398 YLPVRGETIEMLKIKESLELMOYLPOHTIETRYQOQOQHLLQKQTSIQSPSSYGNSSPPLNKNKSNX  
 US-09-538- 381 LPSVSQILNPOQGNALPTPTTPGGMGANTPMWGTHPMVAGDNNGISPTOALPPLSMBSTS  
 US-09-538- 381 LPSVSQILNPOQGNALPTPTTPGGMGANTPMWGTHPMVAGDNNGISPTOALPPLSMBSTS  
 US-09-538- 436 LPSVSQILNPOQGNALPTPTTPGGMGANTPMWGTHPMVAGDNNGISPTOALPPLSMBSTS  
 US-09-538- 475 LPSVSQILNPOQGNALPTPTTPGGMGANTPMWGTHPMVAGDNNGISPTOALPPLSMBSTS  
 US-09-538- 475 LPSVSQILNPOQGNALPTPTTPGGMGANTPMWGTHPMVAGDNNGISPTOALPPLSMBSTS

US-09-538- 436 LPSVSQLINPQORALPTTIPDCMGANIPMGTHYMAADNMGSLPTQALPPPLSPST  
 US-09-538- 381 LPSVSQLINPQORALPTTIPDCMGANIPMGTHYMAADNMGSLPTQALPPPLSPST  
 US-09-538- 381 LPSVSQLINPQORALPTTIPDCMGANIPMGTHYMAADNMGSLPTQALPPPLSPST  
 633377 489 krsygeprstveslqkvgeqvtlllegdagaarlpgqdfldtlaesidnlkaevsgveadl  
 consensus lpsvsgtlnpqrnalptt-p-gmganipmgthmymagdmnglspctga-lppplspst

US-09-538- 365 PRGAAPQSDVFPFHSLPNNHSTVP  
 US-09-538- 369 PRRETPKQSDVFPFHSLKPNRSVYP  
 US-09-538- 424 PRRETPKQSDVFPFHSLKPNRSVYP  
 US-09-538- 459 PRGAAPQSDVFPFHSLPNNHSTVP  
 US-09-538- 442 HCTPPPPYPTDCSIV  
 US-09-538- 442 HCTPPPPYPTDCSIV  
 US-09-538- 497 HCTPPPPYPTDCSIV  
 US-09-538- 536 HCTPPPPYPTDCSIV  
 US-09-538- 536 HCTPPPPYPTDCSIV  
 US-09-538- 536 HCTPPPPYPTDCSIV  
 US-09-538- 497 HCTPPPPYPTDCSIV  
 US-09-538- 442 HCTPPPPYPTDCSIV  
 US-09-538- 442 HCTPPPPYPTDCSIV  
 633377 550 kmrltaadvsvsvkietnemleesakgliddlindlarlfkvkeinekv  
 consensus hctppppypdcslvsf--nl---cldyftctglttiyqiehyemddlasikipeqfzha

US-09-538- 390  
 US-09-538- 394  
 US-09-538- 449  
 US-09-538- 484  
 US-09-538- 457  
 US-09-538- 457  
 US-09-538- 512  
 US-09-538- 551  
 US-09-538- 597 IMKGILDHROLHAFSSPHILRTPSGASTVSVSSSTRGERVIDAVRFTLRQTISPPRDE  
 US-09-538- 558 IMKGILDHROLHAFSSPHILRTPSGASTVSVSSSTRGERVIDAVRFTLRQTISPPRDE  
 US-09-538- 503 IMKGILDHROLHAFSSPHILRTPSGASTVSVSSSTRGERVIDAVRFTLRQTISPPRDE  
 US-09-538- 503 IMKGILDHROLHAFSSPHILRTPSGASTVSVSSSTRGERVIDAVRFTLRQTISPPRDE  
 633377 602  
 consensus imkgildhrqlh-fspp-hllrtps-astvsvgssetrgervidavrfllrqctisfprde

US-09-538- 449  
 US-09-538- 484  
 US-09-538- 457  
 US-09-538- 457  
 US-09-538- 512  
 US-09-538- 551  
 US-09-538- 658 WNDNFMDARRNKQORIKEGE  
 US-09-538- 619 WNDNFMDARRNKQORIKEGE  
 US-09-538- 564 WNDNFMDARRNKQORIKEGE  
 US-09-538- 564 WNDNFMDARRNKQORIKEGE  
 633377 602  
 consensus wndnfmd-rrnkqori---ge

Alignment score = -6012.00

Scoring matrix:

	1	2	3	4	5	6	7	8	9	10	11	12
1	-190	-399	-734	-75	-668	-1003	-366	-216	-554	-75	-668	
2		-112	-548	293	-452	-888	434	-315	-769	292	-457	
3			76	-314	168	-264	-315	313	-147	-321	171	
4				-646	-44	108	-747	-123	219	-648	-54	
5					-167	-603	97	-148	-462	577	-172	
6						21	-652	-24	-91	-172	456	
7							-1084	-460	-118	-604	20	
8								-73	-529	106	-647	
9									91	-148	-19	
10										-469	-91	
11											-167	
12												-167
13												

13

1	-1019
2	-911
3	-289
4	77



[illegible]

US-09-538-	178	DVSPFOOSTAKSATWTYSTELKKYLCOI	ATCTCPIQIKWMPPOGAVIRAMP
US-09-538-	139	DVSFOOSTAKSATWTYSTELKKYLCOI	ATCPIQIKWMPPOGAVIRAMP
US-09-538-	84	DVSFOOSTAKSATWTYSTELKKYLCOI	ATCPCIQIKWMPPOGAVIRAMP
US-09-538-	84	DVSFOOSTAKSATWTYSTELKKYLCOI	ATCPCIQIKWMPPOGAVIRAMP
consensus	184	Dltekavkgebevarisvclqkqnelkldsgihvkkaredfislenvearlte	
caa49535	184	DvsfgqstakaawtctybetkkytqdgngsscteahtcpidqikwmTppgavirampy	
US-09-538-	64	ALSPSPALPSNTDYGPHSPDVSFOOSTAKSATWTYSTELKKYLCOIAKTCPIQIKWMTPE	
US-09-538-	64	ALSPSPALPSNTDYGPHSPDVSFOOSTAKSATWTYSTELKKYLCOIAKTCPIQIKWMTPE	
US-09-538-	119	ALSPSPALPSNTDYGPHSPDVSFOOSTAKSATWTYSTELKKYLCOIAKTCPIQIKWMTPE	
US-09-538-	158	ALSPSPALPSNTDYGPHSPDVSFOOSTAKSATWTYSTELKKYLCOIAKTCPIQIKWMTPE	
US-09-538-	137	YKKAHVTEVWKRCPNHLSREFNEGQIAPPSHLIRVEGNSHAQYVDDPIGRQSVLPVEPE	
US-09-538-	137	YKKAHVTEVWKRCPNHLSREFNEGQIAPPSHLIRVEGNSHAQYVDDPIGRQSVLPVEPE	
US-09-538-	192	YKKAHVTEVWKRCPNHLSREFNEGQIAPPSHLIRVEGNSHAQYVDDPIGRQSVLPVEPE	
US-09-538-	231	YKKAHVTEVWKRCPNHLSREFNEGQIAPPSHLIRVEGNSHAQYVDDPIGRQSVLPVEPE	
US-09-538-	231	YKKAHVTEVWKRCPNHLSREFNEGQIAPPSHLIRVEGNSHAQYVDDPIGRQSVLPVEPE	
US-09-538-	192	YKKAHVTEVWKRCPNHLSREFNEGQIAPPSHLIRVEGNSHAQYVDDPIGRQSVLPVEPE	
US-09-538-	137	YKKAHVTEVWKRCPNHLSREFNEGQIAPPSHLIRVEGNSHAQYVDDPIGRQSVLPVEPE	
US-09-538-	137	YKKAHVTEVWKRCPNHLSREFNEGQIAPPSHLIRVEGNSHAQYVDDPIGRQSVLPVEPE	
caa49535	245	YkkaehvtevwkrCPNHLSREFNEGQIAPPSHLIRVEGNSHAQYVDDPIGRQSVLPVEPE	
consensus	245	YkkaehvtevwkrCPNHLSREFNEGQIAPPSHLIRVEGNSHAQYVDDPIGRQSVLPVEPE	
US-09-538-	125	PROGAVIRAMPVYKKAHVTEVWKRCPNHLSREFNEGQIAPPSHLIRVEGNSHAQYVDDP	
US-09-538-	125	PROGAVIRAMPVYKKAHVTEVWKRCPNHLSREFNEGQIAPPSHLIRVEGNSHAQYVDDP	
US-09-538-	180	PROGAVIRAMPVYKKAHVTEVWKRCPNHLSREFNEGQIAPPSHLIRVEGNSHAQYVDDP	
US-09-538-	219	PROGAVIRAMPVYKKAHVTEVWKRCPNHLSREFNEGQIAPPSHLIRVEGNSHAQYVDDP	
US-09-538-	198	PROGAVTEFTTLVYNFMNCSSCVGAMNRRPLIIVTLETBROGOVLGRCCFPARICACPGDR	
US-09-538-	198	PROGAVTEFTTLVYNFMNCSSCVGAMNRRPLIIVTLETBROGOVLGRCCFPARICACPGDR	
US-09-538-	253	PROGAVTEFTTLVYNFMNCSSCVGAMNRRPLIIVTLETBROGOVLGRCCFPARICACPGDR	
US-09-538-	292	PROGAVTEFTTLVYNFMNCSSCVGAMNRRPLIIVTLETBROGOVLGRCCFPARICACPGDR	
US-09-538-	292	PROGAVTEFTTLVYNFMNCSSCVGAMNRRPLIIVTLETBROGOVLGRCCFPARICACPGDR	
US-09-538-	253	PROGAVTEFTTLVYNFMNCSSCVGAMNRRPLIIVTLETBROGOVLGRCCFPARICACPGDR	
US-09-538-	198	PROGAVTEFTTLVYNFMNCSSCVGAMNRRPLIIVTLETBROGOVLGRCCFPARICACPGDR	
US-09-538-	198	PROGAVTEFTTLVYNFMNCSSCVGAMNRRPLIIVTLETBROGOVLGRCCFPARICACPGDR	
caa49535	306	dmealrteIqCmeddiYtevrrelvsklqegqafkeaaaderIalqaltekIIseseeseri	
consensus	306	ppqvgtefttlvynfmncsscvgamnrrplIIVTLETBROGOVLGRCCFPARICACPGDR	
US-09-538-	186	ITGQASVLVPEBPPOGVTETFTTLVYNFMNCSSCVGAMNRRPLIIVTLETBROGOVLGRCCF	

US-09-538- 186 ITRGQSVLPYEPPOVGTETTYLVNFMONSSCVGMNRPLIIIVLTETRDGVLGRCP  
US-09-538- 241 ITRGQSVLPYEPPOVGTETTYLVNFMONSSCVGMNRPLIIIVLTETRDGVLGRCP  
US-09-538- 280 ITRGQSVLPYEPPOVGTETTYLVNFMONSSCVGMNRPLIIIVLTETRDGVLGRCP  
US-09-538- 259 KADEDSIRKQOVSDSAKNGDGTFRPRONTHGIOMTSIKKRSPPDELLYLPVGRRETYEM  
US-09-538- 259 KADEDSIRKQOVSDSAKNGDGTFRPRONTHGIOMTSIKKRSPPDELLYLPVGRRETYEM  
US-09-538- 314 KADEDSIRKQOVSDSAKNGDGTFRPRONTHGIOMTSIKKRSPPDELLYLPVGRRETYEM  
US-09-538- 353 KADEDSIRKQOVSDSAKNGDGTFRPRONTHGIOMTSIKKRSPPDELLYLPVGRRETYEM  
US-09-538- 353 KADEDSIRKQOVSDSAKNGDGTFRPRONTHGIOMTSIKKRSPPDELLYLPVGRRETYEM  
US-09-538- 314 KADEDSIRKQOVSDSAKNGDGTFRPRONTHGIOMTSIKKRSPPDELLYLPVGRRETYEM  
US-09-538- 259 KADEDSIRKQOVSDSAKNGDGTFRPRONTHGIOMTSIKKRSPPDELLYLPVGRRETYEM  
US-09-538- 259 KADEDSIRKQOVSDSAKNGDGTFRPRONTHGIOMTSIKKRSPPDELLYLPVGRRETYEM  
ca49535 367 pseeirleeeiqkledstgpkedggfrhseafealqgksgjldarlqhvedgvlsmgvas  
consensus kadedstirkqvsd-xngdgtkrpfrqubhgimtsiktrspddellypvrgretyem  
US-09-538- 247 EARICACPGRDKADEDSIRKQOVSDSAKNGD AFRONTHGIOMTSIKKRSPPDELL  
US-09-538- 247 EARICACPGRDKADEDSIRKQOVSDSAKNGDGTFRPRONTHGIOMTSIKKRSPPDELL  
US-09-538- 302 EARICACPGRDKADEDSIRKQOVSSTNGDGTFRPRONTHGIOMTSIKKRSPPDELL  
US-09-538- 341 EARICACPGRDKADEDSIRKQOVSDSAKNGD AFRONTHGIOMTSIKKRSPPDELL  
US-09-538- 320 LKIKESLELMQYLPQHTIETFRQOQOQHLLQKQTSIQSPSSYGNSSPPLNKMNSMK  
US-09-538- 320 LKIKESLELMQYLPQHTIETFRQOQOQHLLQKQTSIQSPSSYGNSSPPLNKMNSMK  
US-09-538- 375 LKIKESLELMQYLPQHTIETFRQOQOQHLLQKQTSIQSPSSYGNSSPPLNKMNSMK  
US-09-538- 375 LKIKESLELMQYLPQHTIETFRQOQOQHLLQKQTSIQSPSSYGNSSPPLNKMNSMK  
US-09-538- 414 LKIKESLELMQYLPQHTIETFRQOQOQHLLQKQTSIQSPSSYGNSSPPLNKMNSMK  
US-09-538- 414 LKIKESLELMQYLPQHTIETFRQOQOQHLLQKQTSIQSPSSYGNSSPPLNKMNSMK  
US-09-538- 375 LKIKESLELMQYLPQHTIETFRQOQOQHLLQKQTSIQSPSSYGNSSPPLNKMNSMK  
US-09-538- 320 LKIKESLELMQYLPQHTIETFRQOQOQHLLQKQTSIQSPSSYGNSSPPLNKMNSMK  
US-09-538- 320 LKIKESLELMQYLPQHTIETFRQOQOQHLLQKQTSIQSPSSYGNSSPPLNKMNSMK  
ca49535 428 arqteaeleellaksgehegrlaalOgrleglgsaeaddqglasvtrslgetqlvlygdvee  
consensus llkikeslelmqylpqhtietvrgqgqgqhhllekqte-qg-sasygnsppllkkmnmk  
US-09-538- 304 YLPVGRRETYEMLLKIKESLELMQYLPQHTIETFRQOQOQHLLQKHLISACRNEIYE  
US-09-538- 308 YLPVGRRETYEMLLKIKESLELMQYLPQHTIETFRQOQOQHLLQKHLISACRNEIYE  
US-09-538- 363 YLPVGRRETYEMLLKIKESLELMQYLPQHTIETFRQOQOQHLLQKHLISACRNEIYE  
US-09-538- 398 YLPVGRRETYEMLLKIKESLELMQYLPQHTIETFRQOQOQHLLQKHLISACRNEIYE  
US-09-538- 381 LPSVSQILNPQONALPTPTTPGGMGANIPMGTHMPAGDNNGLSPTQALPPPLSMPSTS  
US-09-538- 381 LPSVSQILNPQONALPTPTTPGGMGANIPMGTHMPAGDNNGLSPTQALPPPLSMPSTS  
US-09-538- 436 LPSVSQILNPQONALPTPTTPGGMGANIPMGTHMPAGDNNGLSPTQALPPPLSMPSTS  
US-09-538- 475 LPSVSQILNPQONALPTPTTPGGMGANIPMGTHMPAGDNNGLSPTQALPPPLSMPSTS

US-09-538- 475 LPSVSQILNPQONALPTPTTPGGMGANIPMGTHMPAGDNNGLSPTQALPPPLSMPSTS  
US-09-538- 436 LPSVSQILNPQONALPTPTTPGGMGANIPMGTHMPAGDNNGLSPTQALPPPLSMPSTS  
US-09-538- 381 LPSVSQILNPQONALPTPTTPGGMGANIPMGTHMPAGDNNGLSPTQALPPPLSMPSTS  
US-09-538- 381 LPSVSQILNPQONALPTPTTPGGMGANIPMGTHMPAGDNNGLSPTQALPPPLSMPSTS  
ca49535 489 LKrsveglpsetveslqkvgeqvhtllsqdaqaarlppqdflarlslanlkasvqvead  
consensus lpsvsgilnpqonaltpct-p-gmganipmgthmpagdnnglsptqalppplsmpsts  
US-09-538- 365 PRGEAPQSDVFFRHSNPNHSHVYP  
US-09-538- 369 PRRETPKQSDVFFRHSKPPNRSVYP  
US-09-538- 424 PRRETPKQSDVFFRHSKPPNRSVYP  
US-09-538- 459 PRGEAPQSDVFFRHSNPNHSHVYP  
US-09-538- 442 HCTPPPPYPTDCSIV  
US-09-538- 442 HCTPPPPYPTDCSIV  
US-09-538- 497 HCTPPPPYPTDCSIV  
US-09-538- 536 HCTPPPPYPTDCSIV  
US-09-538- 536 HCTPPPPYPTDCSIV  
US-09-538- 536 HCTPPPPYPTDCSIV  
US-09-538- 497 HCTPPPPYPTDCSIV  
US-09-538- 442 HCTPPPPYPTDCSIV  
US-09-538- 442 HCTPPPPYPTDCSIV  
ca49535 550 lkmrltravdalvayavkietnemlesakjlddrndidrlfvrvkekiehekv  
consensus hctppppypctdeciavef---l-----cldyftcgtglttyqiehyemddlaakipeqfzha  
US-09-538- 390  
US-09-538- 394  
US-09-538- 449  
US-09-538- 484  
US-09-538- 457  
US-09-538- 457  
US-09-538- 512  
US-09-538- 551  
US-09-538- 597 IMKGIIDHRQLHDFSSPRLRTPSGASTVSGSSETRGERVIDAVRFTLRQTIISFPPRDE  
US-09-538- 558 IMKGIIDHRQLHDFSSPRLRTPSGASTVSGSSETRGERVIDAVRFTLRQTIISFPPRDE  
US-09-538- 503 IMKGIIDHRQLHDFSSPRLRTPSGASTVSGSSETRGERVIDAVRFTLRQTIISFPPRDE  
US-09-538- 503 IMKGIIDHRQLHDFSSPRLRTPSGASTVSGSSETRGERVIDAVRFTLRQTIISFPPRDE  
ca49535 603  
consensus lmkgiidhrqlh-fsasp-nlirtpe-asvsvsgsetrgervidavrtlrqtiisfpprde  
US-09-538- 390



US-09-538- 394  
US-09-538- 449  
US-09-538- 484  
US-09-538- 457  
US-09-538- 457  
US-09-538- 512  
US-09-538- 551  
US-09-538- 658  
US-09-538- 619  
US-09-538- 564  
US-09-538- 564  
CAA49535 603  
consensus

wndfnfmd-rnkqgrl---ge

Alignment score = -6009.00

Scoring matrix:

22	2	3	4	5	6	7	8	9	10	11	12
22	-185	-404	-739	-80	-673	-1008	-356	-221	-558	-80	-673
2		-112	-548	293	-452	-888	434	-315	-769	292	-457
3			76	-314	168	-264	-315	313	-147	-321	171
4				-646	-44	108	-747	-123	219	-648	-54
5					-167	-603	97	-148	-462	577	-172
6						21	-652	-24	-91	-172	456
7							-1084	-460	-118	-604	20
8								-73	-529	106	-647
9									91	-148	-19
10										-469	-91
11											-167
12											
13											

13

22 -1024  
2 -911  
3 -289

4 77  
5 -626  
6 -4  
7 362  
8 -1103  
9 -483  
10 -91  
11 -623  
12 -3  
13

-----

> O <  
O| 10 IntellGenetics  
> O <

FastDB - Fast Pairwise Comparison of Sequences  
Release 5.4

Results file caa49535.res made by bshears on Wed 9 Jun 104 10:10:28-PDT.

Query sequence being compared: caa49535 (1-602)  
Number of sequences searched: 12  
Number of scores above cutoff: 12

Results of the initial comparison of caa49535 (1-602) with:  
File: /home/bshears/new.pep

100-  
N -  
U 50-  
M -  
B -  
E -  
R -  
O 10-  
S -  
E 5-  
Q -  
U -  
N -  
C -  
E -  
S 0-  
SCORE 0 1 2 2 3 4 5 5 6 7  
SIDEV -5 -4 -2 -1 0 1 5 6 7

## PARAMETERS

Similarity matrix Unitary 1 K-tuple 2  
Mismatch penalty 1.00 Joining penalty 20  
Gap size penalty 0.05 Window size 32  
Cutoff score 0  
Randomization group 0

## SEARCH STATISTICS

Scores: Mean 5 Median 7 Standard Deviation 0.83  
Times: CPU 00:00:00.00 Total Blipped 00:00:00.00

Number of residues: 6199  
Number of sequences searched: 12  
Number of scores above cutoff: 12

The scores below are sorted by initial score.  
Significance is calculated based on initial score.

A 100% identical sequence to the query sequence was not found.

The list of best scores is:

Sequence Name	Description	Length	Score	Opt. Score	Sig. Frame
1. US-09-538-106-24	Sequence 24, Application 18	389	7	61	2.40 0
2. US-09-538-106-18	Sequence 18, Application 15	393	7	61	2.40 0
3. US-09-538-106-15	Sequence 15, Application 15	448	7	66	2.40 0
4. US-09-538-106-22	Sequence 22, Application 16	586	6	77	1.20 0
5. US-09-538-106-16	Sequence 16, Application 13	586	6	78	1.20 0
6. US-09-538-106-13	Sequence 13, Application 19	641	6	78	1.20 0
7. US-09-538-106-19	Sequence 19, Application 13	680	6	77	1.20 0
8. US-09-538-106-23	Sequence 23, Application 17	461	5	28	0.00 0
9. US-09-538-106-17	Sequence 17, Application 21	461	5	28	0.00 0
10. US-09-538-106-21	Sequence 21, Application 14	483	5	79	0.00 0
11. US-09-538-106-14	Sequence 14, Application 20	516	5	74	0.00 0
12. US-09-538-106-20	Sequence 20, Application 24	555	5	74	0.00 0

## 1. caa49535 (1-602)

US-09-538-106-24 Sequence 24, Application US/09538106

Sequence 24, Application US/09538106  
GENERAL INFORMATION:

APPLICANT: MCKEON, FRANK  
APPLICANT: YANG, ANNIE  
APPLICANT: LODA, MASSIMO  
APPLICANT: SIGNORETTI, SABINA  
APPLICANT: CRUM, CHRISTOPHER

TITLE OF INVENTION: CELL REGULATORY GENES, ENCODED PRODUCTS, AND USES  
TITLE OF INVENTION: RELATED THERETO

FILE REFERENCE: HMV-038.02

CURRENT APPLICATION NUMBER: US/09/538,106

CURRENT FILING DATE: 2000-03-29

PRIOR APPLICATION NUMBER: 09/174,493

PRIOR FILING DATE: 1998-10-15

PRIOR APPLICATION NUMBER: 60/087,216

PRIOR FILING DATE: 1998-05-29

PRIOR APPLICATION NUMBER: 60/062,076

PRIOR FILING DATE: 1997-10-15

NUMBER OF SEQ ID NOS: 53

SOFTWARE: PatentIn Ver. 2.1

SEQ ID NO 24

LENGTH: 389

TYPE: PRT

ORGANISM: Murine sp.

Initial Score = 7 Optimized Score = 61 Significance = 2.40  
Residue Identity = 18% Matches = 80 Mismatches = 281  
Gaps = 65 Conservative Substitutions = 0

MPKAKRGSKGHAAPSKEKGAHPSGADVAKKPPAPQPPPPAHPQHPQCHPQNAHGKGRG  
MLYLENNQTOFSEPOYTNLGLNSMDQ  
X 10 20  
80 90 100 110 120 130 140  
GGGGGKSSSS--SSASAAAAAASSSASCRRIGRALNFFLYLALVAAAFSGCVHVEVQVRSRQ  
QIQNGSSSTSPYNTDAQNSVTAPSPYQPS--STPDAL--SPSPAIPTNTVPG--PSPFVSPQSSSTAKS  
30 40 50 60 70 80 90  
150 160 170 180 190 200  
DFSRQREHGGGGLGVGVGVGLATFGR---FSRIRSSQHK--QDITEAAYQGSSEVSRISVLOKQ  
ATWTYSTEL-KLLVQCIATCPICQIKVMTPPQGAIVRAMPYKKAHVTEVYKRCPPHLSRPNEGQIAP  
100 110 120 130 140 150 160  
210 NEIL-----KDLSDGIHVYKDAERDFSLNTEVBERLTETLTKSINDIATFTVEQKSKQKIND

```

PHILIRVGNASHADYVEDPITGOSVLYVEPPOVGTET-----TYL-VNFMONSVCVGMNRRLILI
170      180      190      200      210      220      230
270      280      290      300      310      320      330
MKAKVASIEEENKODJLKALKAVEIOTSAKSEMMEMALRSTLOTMSDIDYTEVRELVISIKOEQAFK-
-----VLTETRDG--OVLGRRCFEARICACPERDKAADSDIRKQVSDSAKNGDAFRONTGIIQTSIXK
240      250      260      270      280      290
340      350      360      370      380      390      400
EADATERLAL-----QALTEKLSEESVSRLPEERLRLEELERLQKSDSHGPRDEGGRHSAFELQKSGS
RSPDELLIYPRGRRETYEMLLIKISLMLMYLPDQHTTETFRQOOOOH-----QHLLQK--
300      310      320      330      340      350
410      420      430      440 X      450      460      470
GLDS---RLQCHVEDGVISMVQASARQTESLILSKSQEHORPLAALQGRLEGISSEADQGLASTVSRIGL
HLLSACFNNELVEPRGEAPFQSDVFRPHNPNHVSVP
360      370      380      X
480      490
ETOLVYGVDEVELKRS

```

2. caa49535 (1-602)  
US-09-538-106-18 Sequence 18, Application US/09538106

Sequence 18, Application US/09538106  
GENERAL INFORMATION:

APPLICANT: MCKEON, FRANK  
 APPLICANT: YANG, ANNIE  
 APPLICANT: LODA, MASSIMO  
 APPLICANT: SIGNORETTI, SABINA  
 APPLICANT: CRIM, CHRISTOPHER  
 TITLE OF INVENTION: CELL REGULATORY GENES, ENCODED PRODUCTS, AND USES  
 TITLE OF INVENTION: RELATED THERETO  
 FILE REFERENCE: HMV-038.02  
 CURRENT APPLICATION NUMBER: US/09/538,106  
 CURRENT FILING DATE: 2000-03-29  
 PRIOR APPLICATION NUMBER: 09/174,493  
 PRIOR FILING DATE: 1998-10-15  
 PRIOR APPLICATION NUMBER: 60/087,216  
 PRIOR FILING DATE: 1998-05-29  
 PRIOR APPLICATION NUMBER: 60/062,076  
 PRIOR FILING DATE: 1997-10-15  
 NUMBER OF SEQ. ID NOS: 53  
 SOFTWARE: PatentIn Ver. 2.1  
 SEQ. ID NO. 18  
 LENGTH: 393  
 TYPE: PRT  
 ORGANISM: Homo sapiens

Initial Score	=	7	Optimized Score	=	61	Significance	=	2.40
Residue Identity	=	19%	Matches	=	83	Mismatches	=	278
Gaps	=	69	Conservative Substitutions	=	0			

10 20 30 40 50 60 70  
 MSAKQKSGKGGHGAAPSEKGAHPGSGADVAKKRPAPQCPRRPRAHPOCHQCHQCHQCHQCHGKHRRGG  
 80 90 100 110 120 130 140  
 GGGGKSSSS--SSASAAAAAASSASCSRRLRALNTFLYALVAALAAFGMCVHHLEEVQVRRSRQ  
 150 160 170 180 190 200  
 QIQNGSSSTSPYNTDHAQNSVLAASPYAQPSS-TFDDL--SPSPALPSNTDYPG--PHSFQVSGSSSTAKS  
 210 220 230 240 250 260 270 280 290 300  
 10 20 30 40 50 60 70 80 90 100  
 MLLENNAQTQSPBPQYTNLGLLSMQD X

ATWVSYSTL-KKLYCQIAKTPIDIKMTTPPCQAVIRAMPVYKKAEHTEVVKRCNPHELSRENEQIADP  
DPSKRELEGGLOGVSEVKOSLOATGCT---FESTLRSSQHK--QDLTEKAVKGESEVRISEVIQKQ  
150 160 170 180 190 200

```

100      110      120      130      140      150      160
210
NEIL-----KDSDIRHYKARBRDTSLENTVEERLEITISINDNATITVQKSOKEIND
PSHIRVEGNSHAQYVEDITRQGSVLVYPPOVGETFT-----TVL-YNFMCNSSCVGNNRRPILII-
170      180      190      200      210      220      230
270      280      290      300      310      320      330
MKKAVSLSESENKODI-KALKKA--VKIQTSAKREMDMALSTIQTMSD-IYNEVELVSLKOBEOO
-----VLETRDS--OVLRRCFEKRICACGRRKDEDSIRKQOVSSTIKGDBTKPRFONTHGIQMTS
240      250      260      270      280      290
340      350      360      370      380      390      400
APK-EADTERLAL-----QALTEKLIRSESVSLPEEIRRLBEE-PROKSDSHGKEDGFRHSEAFEAQ
IKRRSPDELLAYLPGRGETYEMLLIKESLELMQVLPHQTELETRQOOOOOH-----CHLL
300      310      320      330      340      350
410      420      430      440 X      450      460      470
QKSGJDS--RLOHYEDVLSMOVASARQTESLSLSSQHEORLALQGRLEGSSSEADODGLASTV
QK--HLISACFRRELVEPRRETQKSDVFFHSHKSPRSTYP
360      370      380      390 X
480      490
RSLGEFOTLVLYGDVEELKRS

```

3. caa49535 (1-602)

Sequence 15, Application US/09538106

APPLICANT: MCKEON, FRANK  
 APPLICANT: YONG, ANNIE  
 APPLICANT: LODA, MASSIMO  
 APPLICANT: SIGNORETTI, SABINA  
 APPLICANT: CUM, CHRISTOPHER  
 TITLE OF INVENTION: CELL REGULATORY GENES, ENCODED PRODUCTS, AND USES  
 TITLE OF INVENTION: RELATED THERETO  
 FILE REFERENCE: HMV-038.02  
 CURRENT APPLICATION NUMBER: US/09/538,106  
 CURRENT FILING DATE: 2000-03-29  
 PRIOR APPLICATION NUMBER: 09/174,493  
 PRIOR FILING DATE: 1998-10-15  
 PRIOR APPLICATION NUMBER: 60/087,216  
 PRIOR FILING DATE: 1998-05-29  
 PRIOR APPLICATION NUMBER: 60/062,076  
 PRIOR FILING DATE: 1997-10-15  
 NUMBER OF SEQ ID NOS: 53  
 SOFTWARE: PatentIn Ver. 2.1  
 SEQ ID NO 15

```
Initial Score = 7 Optimized Score = 66 Significance = 2.40
Residue Identity = 18% Matches = 93 Mismatches = 296
Gaps = 101 Conservative Substitutions = 0
```

```

      10      20      30      40      50      60      70
MSQSTQTNFELEPEVFQIIMWDFLEQPCISVQFIDLNFEVDESDGATNKIEISMCQIRMODSDLSDFPMWPOY
      10 X      20      30      40      50      60      70
      X      10      20      30      40      50      60      70
      PMSAKQ-----RGSKGKGHAAPSKEKA---HPSGGADVDVAKKPPAPQPCPP
      10      20      30      40      50      60      70
      50      60      70      80      90      100      110
PPAPHQCHPQCHPQNQAHGKGGKRRGGGGGGKSSSS--SSASAAAAAASSSSASCSEIRLRIATNFIPTLA
      10      20      30      40      50      60      70      80      90      100      110
      TNLGLNSDQ--IQN-----GSSSTSPYNTDAQNSVTAPSPYQPS--STFDAL--SPSPA
      80      90      100      110      120

```

120 130 140 150 160 170 180  
 LVAAAFSGVCHVIEVQVYRSHQDPSRQREBELGQGLQGVQVQSLQATFGT---FESILRSSCHK-  
 IPNTVPG--PSPFVSPFOQSSATKATWTYSTEL--KTLVQCIQACTCPIQIKWTPPQGAIVAMPYTK  
 130 140 150 160 170 180 190  
 -QDLTEKAVNGESEVSRISSEVLQKLEL-----KDLSDIHHVKARERDFTSLNTEVERL  
 AEHTEVVKRCPMHELSRENEGQIAPPSHLIIVEGNSHAQVYEDPITRQSLVPEYEPQVGTFT-----  
 200 210 220 230 240 250 260  
 250 260 270 280 290 300 310  
 TELTKSINDIAITFEVQKRSQKEINDMKAKVASLEESGKQDL--KALKEA--VKEIQTSKSRWMBEAL  
 TVL--YVPMGSSCVGNNRPILII-----VLETRDG--QVLGRCFEARIACCPGRDKADESTRKO  
 270 280 290 300 310 320  
 320 330 340 350 360 370  
 RSTLQTMESD--IYTEVRELVSLKQEQQAFK--EADTERLAL-----QALTEKLRSESVSRLLPEIRRLSE  
 OVSDSKNGDGTFRPFRQWTHGCIQMTSIRKRSPPDELLYLPRGRFTEYEMLLKIKESLELMQVLPQHTIET  
 330 340 350 360 370 380 390  
 380 390 400 410 420 430 440 X  
 LKQLKSDSGPREDGFRHSEAFELQOKSQGLDS---RLQHYEDVLSMQVASQCTESLSLSKQEH  
 YRQOQOQOH-----QHLOK--HLISACFENELVEPRETRPKQSDVFFRSRKPNSVVP  
 400 410 420 430 440 X  
 450 460 470 480 490  
 QRLAQLGRLEGSGSEADODGLASTVRSGLGTQVLVYGDVEELKKS  
 4. caa49535 (1-602)  
 US-09-538-106-22 Sequence 22, Application US/09538106

Sequence 22, Application US/09538106  
 GENERAL INFORMATION:  
 APPLICANT: MCKEON, FRANK  
 APPLICANT: YANG, ANNIE  
 APPLICANT: LODA, MASSIMO  
 APPLICANT: SIGNORETTI, SABINA  
 APPLICANT: CRUM, CHRISTOPHER  
 TITLE OF INVENTION: CELL REGULATORY GENES, ENCODED PRODUCTS, AND USES  
 TITLE OF INVENTION: RELATED THERETO  
 FILE REFERENCE: HMV-038.02  
 CURRENT APPLICATION NUMBER: US/09/538,106  
 CURRENT FILING DATE: 2000-03-29  
 PRIOR APPLICATION NUMBER: 09/174,493  
 PRIOR FILING DATE: 1998-10-15  
 PRIOR APPLICATION NUMBER: 60/087,216  
 PRIOR FILING DATE: 1998-05-29  
 PRIOR APPLICATION NUMBER: 60/062,076  
 PRIOR FILING DATE: 1997-10-15  
 NUMBER OF SEQ ID NOS: 53  
 SOFTWARE: PatentIn Ver. 2.1  
 SEQ ID NO 23  
 LENGTH: 586  
 TYPE: PRT  
 ORGANISM: Murine sp.  
 Initial Score = 6 Optimized Score = 77 Significance = 1.20  
 Residue Identity = 19% Matches = 111 Mismatches = 343  
 Gaps = 119 Conservative Substitutions = 0

GLNSMDQIQNGSSSTSPYNTDHAQNSVTAPSPYAQSPSTFDALSPSPALNSNDYGPSPSPVSPFOQSSST  
 30 40 50 60 70 80 90  
 X  
 MPS--AKRSGSKGHAASPS  
 10

20 30 40 50 60 70 80  
 EKGA-----HPSGADDAVAKKPPAPQCPPPAPAPQHPQOHPOQHPQNA---HGKQCHRGGGGGKSSSS  
 AKSATWYSTEKLKLYQCIQACTCPIQIKWTPP-----QGAIVAMPYTKAEHTEVVKRCPMHEL  
 100 110 120 130 140 150  
 90 100 110 120 130 140  
 SSAGAAAAAASSSSSSRRRLGRALFLFYALVAALAAFGVCHVIEVQV-----RRSH  
 SRENEGQIAPPS-----HLIR--VEGNSHAQVYEDPITRQSVLVPYEPQVGTFTTVLYNPMGSSSC  
 160 170 180 190 200 210  
 150 160 170 180 190 200  
 QDFSRQREBEL-----GGGLQGVQKQVQSLQATFGTPESTILRSSQHKQDLTEKAVNGESEVSRISVL  
 VGMNRRPILIIYVLETRDQVL--GRACFEARIACGGRKXADESIRKQVSDSA--KNG-----DGKR  
 220 230 240 250 260 270 280  
 210 220 230 240 250 260  
 QKLENEILKDISDI--HVVKARERDFTSLNTEVERLT--ELTK-----SINDIAIFT--EVQKRSQ  
 PFRON-----THGICQTSIKRRSPDELLYLPRGRFTEYEMLLKIKESLELMQVLPQHTIETVYRQOQOQO  
 290 300 310 320 330 340  
 270 280 290 300 310 320 330  
 KEINDMKAKVASLEESGK--KODIKALKEAVKEIQTSKSRWMBEALRSTLQTMESDIYTEVRELVSLKQ  
 HQHLLQKQTSWQSSSYGNSPPLNNKNSMKNLPSVQOLNPOQRNAL--TPPTM-----PEGMGANIPM  
 350 360 370 380 390 400 410  
 340 350 360 370 380 390 400  
 QQAFKEAADTERL--ALQALTEKLRSESVSRLLPEIRRLSELRQKSDSHGPKEDGFRHSEAFALQOK  
 GTHMPMAGDMNGSLPTQALPPPL--SNPSTS-----HCTPPPYPTDSCSVSFLARIKSSCUDYF-----T  
 420 430 440 450 460 470  
 410 420 430 440 450 460 470  
 SQGLDSRLQHYEDGVLSM--QVAGARQPE-----SLESLSKQEH-----EORTLALQ--RLBGLSGSEADQ  
 TQGLTTIYQ--IEHYSMDLALIKLPEQFRHAIWKGLDRQHLHDFSSPPHLRTPPSGASTVSGSSEIRG  
 480 490 500 510 520 530 540  
 470 480 490 500 510 520 530  
 DGLASTVR--SLGFTQVLVYGDVEELKRSVSELPSTYESLQKVEQVHTLSSQQAARLPDPDFLRSLSL  
 ERVIDAVFTLRQTSFPPRD--EWNDFEMDMSRNNKQOKRIKEGE  
 550 560 570 580 X  
 540 550 560  
 DNKASYSQVEADLKMRLTAVDSLV

5. caa49535 (1-602)  
 US-09-538-106-16 Sequence 16, Application US/09538106  
 Sequence 16, Application US/09538106  
 GENERAL INFORMATION:  
 APPLICANT: MCKEON, FRANK  
 APPLICANT: YANG, ANNIE  
 APPLICANT: LODA, MASSIMO  
 APPLICANT: SIGNORETTI, SABINA  
 APPLICANT: CRUM, CHRISTOPHER  
 TITLE OF INVENTION: CELL REGULATORY GENES, ENCODED PRODUCTS, AND USES  
 TITLE OF INVENTION: RELATED THERETO  
 FILE REFERENCE: HMV-038.02  
 CURRENT APPLICATION NUMBER: US/09/538,106  
 CURRENT FILING DATE: 2000-03-29  
 PRIOR APPLICATION NUMBER: 09/174,493  
 PRIOR FILING DATE: 1998-10-15  
 PRIOR APPLICATION NUMBER: 60/087,216  
 PRIOR FILING DATE: 1998-05-29  
 PRIOR APPLICATION NUMBER: 60/062,076  
 PRIOR FILING DATE: 1997-10-15

NUMBER OF SEQ ID NOS: 53  
SOFTWARE: Patentin Ver. 2.1  
SEQ ID NO 16  
LENGTH: 586

TYPE: PRT  
ORGANISM: Homo sapiens

Initial Score = 6 Optimized Score = 78 Significance = 1.20  
Residue Identity = 19% Matches = 113 Mismatches = 341  
Gaps = 132 Conservative Substitutions = 0

```

GLNSMDQIQNGSSSTSPYTDHQNVTAPSPYAPQSPSTFDALSPSPALPSTNDYGPSPFVSFOQST
30      40      50      60      70      80      90
X      MPS---AKQSGSKGCGHGAASPS
EKGQ-----HPSGADVAKKPPAPQPPPPAPHPQHPQHPQQA---HGKGHGGGGGGGKSSSS
100     110     120     130     140     150
AKSATWTYSTEELKLYCQIAKCPQIKMTTPP-----QGAIVRAMPVYKKAHTEVVKRCPNHEL
90      100     110     120     130     140
SSASAAAAAASSASCSRRLGRALNLFYLAALVAALFSGWCVHYLEVOQY-----RRSH
160     170     180     190     200     210
SRENEGQIAPPS-----HLIR--VEGNSHAQYVEDPIGRQSVLYPYPPQVGETTVLVNFMNSSC
150     160     170     180     190     200     210
QDFSRQREEL-----GGGLQGVQKVSQSLQATFGTFESILRSSQHKQ---DLTEKAVKQGESEVSRIS
220     230     240     250     260     270
VGAMNRRLPILIVLTETRDGYL--GRGCFEARICACPGDRKKADEDSIRKQVSDST---KNG-----DG
210     220     230     240     250     260
EVLQKQNLKLDSDGI--HYVKDARERDFTSLENTVEEELT--ELTK-----SINDNIAIFT--EVOK
280     290     300     310     320     330     340
TKRPPRQN-----THGIQMTSIKRRSPDDELILYLVGRGETYEMLKIKESLELMQYLPQHTIETVROO
270     280     290     300     310     320     330
RSQKEINDMKAVASLESEGN--KODLKALKEAVKEIQTSAKREWMDEALRST--LQTMESDIYTEVREL
350     360     370     380     390     400
QOQHHLQKQTSISPSYSGNSPPLKNKMSMKLPVSQILNPQGNALTPPTIPDGKANI-----
330     340     350     360     370     380     390     400
SLKQEQAFKRAADTERL--ALQALTEKLRSSESVSRLEPEIRLEELRLQKSDSHGPKEDGGFRHSEAF
410     420     430     440     450     460
--PMWGTHMPMAGDNNGSLPTQALPPPL--SMPST-----HCTPPPPYPTDCSIVSFLARLGGSSCLDYF-
400     410     420     430     440     450     460
ALQOKSQGLSRLQVHEGVLSM--QVASARQTE-----SLESLSKSGEHQRRLAALQGRLEGGSSEADQD
470     480     490     500     510     520
---TTQGLTIYQ---IEHYSMDLALSLKIPGFRHAIWKGLIDHRQLHE--FSPSHLRTPPS-----
480     490     500     510     520
GLASTV--RLSGTQVLVYGD--VEELKRSVGELPSTVESLQKVQGVHTLLSQDPAQARLPPODFLDRSL
530     540     550     560     570     580
--ASTVSGSSETRERVIDAVRFTLRQTSIFPPRDEWNDPFDMDARRNKQQRKEEGE
540     550     560     570
DNLKASVQVEADLMLMTAVDSLVAVSVKLETENNLL

```

6. caa49535 (1-602)

US-09-538-106-13 Sequence 13, Application US/09538106

Sequence 13, Application US/09538106

# GENERAL INFORMATION:

APPLICANT: MCKEON, FRANK  
APPLICANT: YANG, ANNIE  
APPLICANT: LODA, MASSIMO  
APPLICANT: SIGNORETTI, SABINA  
APPLICANT: CRUM, CHRISTOPHER  
TITLE OF INVENTION: CELL REGULATORY GENES, ENCODED PRODUCTS, AND USES  
FILE REFERENCE: HMV-038.02  
CURRENT APPLICATION NUMBER: US/09/538.106  
CURRENT FILING DATE: 2000-03-29  
PRIOR APPLICATION NUMBER: 09/174.493  
PRIOR FILING DATE: 1998-10-15  
PRIOR APPLICATION NUMBER: 60/087.216  
PRIOR FILING DATE: 1998-05-29  
PRIOR APPLICATION NUMBER: 60/062.076  
PRIOR FILING DATE: 1997-10-15  
NUMBER OF SEQ ID NOS: 53  
SOFTWARE: Patentin Ver. 2.1  
SEQ ID NO 13  
LENGTH: 641  
TYPE: PRT  
ORGANISM: Homo sapiens

Initial Score = 6 Optimized Score = 78 Significance = 1.20  
Residue Identity = 19% Matches = 113 Mismatches = 341  
Gaps = 132 Conservative Substitutions = 0

```

GLNSMDQIQNGSSSTSPYTDHQNVTAPSPYAPQSPSTFDALSPSPALPSTNDYGPSPFVSFOQST
80      90      100     110     120     130     140
X      MPS---AKQSGSKGCGHGAASPS
EKGQ-----HPSGADVAKKPPAPQPPPPAPHPQHPQHPQQA---HGKGHGGGGGGGKSSSS
150     160     170     180     190     200
AKSATWTYSTEELKLYCQIAKCPQIKMTTPP-----QGAIVRAMPVYKKAHTEVVKRCPNHEL
90      100     110     120     130     140
SSASAAAAAASSASCSRRLGRALNLFYLAALVAALFSGWCVHYLEVOQY-----RRSH
220     230     240     250     260     270
SRENEGQIAPPS-----HLIR--VEGNSHAQYVEDPIGRQSVLYPYPPQVGETTVLVNFMNSSC
210     220     230     240     250     260
QDFSRQREEL-----GGGLQGVQKVSQSLQATFGTFESILRSSQHKQ---DLTEKAVKQGESEVSRIS
280     290     300     310     320     330
VGAMNRRLPILIVLTETRDGYL--GRGCFEARICACPGDRKKADEDSIRKQVSDST---KNG-----DG
270     280     290     300     310     320
EVLQKQNLKLDSDGI--HYVKDARERDFTSLENTVEEELT--ELTK-----SINDNIAIFT--EVOK
340     350     360     370     380     390     400
TKRPPRQN-----THGIQMTSIKRRSPDDELILYLVGRGETYEMLKIKESLELMQYLPQHTIETVROO
310     320     330     340     350     360     370
RSQKEINDMKAVASLESEGN--KODLKALKEAVKEIQTSAKREWMDEALRST--LQTMESDIYTEVREL
410     420     430     440     450     460
--PMWGTHMPMAGDNNGSLPTQALPPPL--SMPST-----HCTPPPPYPTDCSIVSFLARLGGSSCLDYF-
400     410     420     430     440     450     460
ALQOKSQGLSRLQVHEGVLSM--QVASARQTE-----SLESLSKSGEHQRRLAALQGRLEGGSSEADQD
470     480     490     500     510     520
---TTQGLTIYQ---IEHYSMDLALSLKIPGFRHAIWKGLIDHRQLHE--FSPSHLRTPPS-----
480     490     500     510     520
GLASTV--RLSGTQVLVYGD--VEELKRSVGELPSTVESLQKVQGVHTLLSQDPAQARLPPODFLDRSL
530     540     550     560     570     580
--ASTVSGSSETRERVIDAVRFTLRQTSIFPPRDEWNDPFDMDARRNKQQRKEEGE
540     550     560     570
DNLKASVQVEADLMLMTAVDSLVAVSVKLETENNLL

```





20           GGHGASPSKGA---HPSGGADVAKKRRPRRQQRPPRRPARNQCHNPOHNQANAGKGHRGSGGGGKK  
               |                    ||                ||               ||              ||  
 30           PLNVDPSPSENGATNKLEISMDCTIRQDDSDLPMPFQTNNGLNSMDQQ--TON-----GS  
               |                    ||                ||               ||              ||  
 40           |                    ||                ||               ||              ||  
 50           |                    ||                ||               ||              ||  
 60           |                    ||                ||               ||              ||  
 70           |                    ||                ||               ||              ||



```
80      90      100      110      120
SSSS--SSASAAAAAASSSASCGRRLGRALNLFYIALVAAAAAFSGMCHVLEVEQVRRSHODPSROR
SSTSPYNTDHAQNSVTAAPSVAQPS-STFDAL--SPSPALPSNTDYPG--PHSPDVAFPQOSTAKSATWTYS
130      140      150      160      170      180      190
EELGGGLGVEQKQSLQATFST---FESTLRSSQHK--QDLTEKAVKQGESEVSRISEVLOKQNEIL--
TEL-KKLVCQIAKTPPIQIKVTPPPQCAVIRANFVYKAEHVEVVKRCPNHELSPENEGQIAPPSHLIR
200      210      220      230      240      250      260
-----KQLSDGIHVYKDARE-----RDFTSLEN-----TVEERLTTELTKSINDNIAIFTEVQKRS
VEGNHSAQYVEDPTIGROSVALVYPPPOVGTEFTTVLNFMCNSSCVGGMNRPIILIVTETRDGQVLGR
270      280      290      300      310      320      330
QKEINDMKAVASLESEGNKQDLKALKEAVKEIQTSKSRBMDWEALRSTLQTMESDIYTEVAELVSLKQE
CEE-----ARTACPG--RDRKA--DEDSIRKQVSDSAKNGDGTKEPFRQ-----NTHGIQWTSIK--
340      350      360      370      380      390      400
QOAFKEAADTERIAL---QALTEKILRSSESVSRLPEEIRLREELRLQKSDSHGPKEDGFRHSEAFBAL
---KRSPDDELIVPVAGRETYEMLTKIKESLELMQYLPQHTIETTYRQOQOQOQ-----QHLLQKQTSMQ
410      420      430      440      450      460
QOKSQGLDSRLQHVEDGYLSMQVASARQTESLLESJLSKSOHEQELA-----ALQGRLEGLGSSSEADQ
SQSSYGNSSPPLNKKNKSNMKLPSVSQLNPQORNALPTPTWPEGMGANI PMWGTHMPPVAGDMNGLSPQALP
470      480      490      500      510      520
DGLASTVSLGFTQLVLVYGDVVELKRSVGELPSVTESLQKVEQVHTLLSODQQAARLPPQDFLDRLSSLD
PPL--SMPSTSHCTPPPPY-----PTDCSIYRIMQV
530      540      550
NKKASVSQVEADLKMRLRT
```





120 130 140 150 160 170 180  
 LVAAAGSGCVHVLVEVQVRSHODFSRORBEELGQGLQGVKQVSLQATFGT----FESILRSSQHK-  
 IPSNTDYPG--PHSFVDSFOQSSAKSATWTYSTEL-KLYLCQIAKTCF-QIKVMTPPPOGAVIRAMPYKK  
 130 140 150 160 170 180 190

190 200 210 220 230 240  
 -QDLTEKAVKQGESEVSRISSEVLQKQNEITL-----KDLSDGIHVVKARERDFTSLVENTVEERL  
 AEHVTEVVKRCPNHELSREFNEGQIAPPSHLIVEGNSHAQVEDPITGROSIVLVEPEPQVGTFT-----  
 200 210 220 230 240 250 260

250 260 270 280 290 300 310  
 TELTKSINDNIAITFEVQKSKQKEINDMKAKVASLSESGNKODL-KALKEA--VKEIQTSASRWMDEAL  
 TVL-YNFMGSSCVGGMNRRPILII-----VTLERDQ--QVLGRCFEARIACAPSGDRKADDSIRKQ  
 270 280 290 300 310 320

320 330 340 350 360 370  
 RSTLQIMESP-ITTEVRELVSLEQEOQAFK-EAADTERLAL-----QALTEKLIRSESEVSRILPEIRRLIEE  
 QVSDSTKMGGTGRPFQONTHGIIQMTSIRKRSPPDELLYLPVGRREYEMILKIKESLELMQYLPQHTIET  
 330 340 350 360 370 380 390

380 390 400 410 420 430 440 X  
 LRQLKSDSHGPKEDGGRHSEAFELQOKSGGDS---RLQHVDEGVLSMQVASAQTESLSLSKSGEHE  
 YRQOQOQH-----QHLQK--HILSACFNEELVEPRETPKOSDVFFRHSKPPNSVYP  
 400 410 420 430 440 X

450 460 470 480 490  
 ORLAPAGALEGGSSEADODGLASTVRSIGETQLVLYGVDEELKRSV

4. 833377 (1-601)  
 US-09-538-106-21 Sequence 21, Application US/09538106

Sequence 21, Application US/09538106

GENERAL INFORMATION:

APPLICANT: MCKEON, FRANK

APPLICANT: YANG, ANNIE

APPLICANT: LODA, MASSIMO

APPLICANT: SIGNORETTI, SABINA

APPLICANT: CRUM, CHRISTOPHER

TITLE OF INVENTION: CELL REGULATORY GENES, ENCODED PRODUCTS, AND USES

FILE REFERENCE: HMV-038.02

CURRENT APPLICATION NUMBER: US/09/538.106

PRIOR FILING DATE: 2000-03-29

PRIOR APPLICATION NUMBER: 09/174,493

PRIOR FILING DATE: 1998-10-15

PRIOR APPLICATION NUMBER: 60/087,216

PRIOR FILING DATE: 1998-05-29

PRIOR APPLICATION NUMBER: 60/062,076

NUMBER OF SEQ ID NOS: 53

SOFTWARE: PatentIn Ver. 2.1

SEQ ID NO 21

LENGTH: 483

TYPE: PRT

ORGANISM: Murine sp.

Initial Score = 7 Optimized Score = 66 Significance = 1.39

Residue Identity = 18% Matches = 90 Mismatches = 299

Gaps = 97 Conservative Substitutions = 0

XMPSAQ-----RGSK

KNFETSCATLQYCPDYQRIETLPAPHSKESYYRSAMSOQTSELSSEVQHIMWPLECPICVQPI

10 20 30 40 50 60 70

20 30 40 50 60 70  
 GGHGAASPEKGA-----HPSGADVDVAKKPPAPQCPPPAPQHPQOHPOHQAHGKGGGGGGGK  
 ELNFDPESENQATNKKIEMSDICRMDDSDLSDBMPQYNTLGLNSMDQO-IGN-----GS  
 80 90 100 110 120 130 140

80 90 100 110 120 130 140  
 SSSS--SSASAAAAAASASASCSRRIGRALNLFYIALVAAAAGCWCVHVLVEVQVRRSHODFSROR  
 SSTSPYNTDHAQNSVTAAPSFAQPS-STFDAL--SPSPALPSNTDYG--PHSFVDSFOQSSAKSATWTYS  
 130 140 150 160 170 180 190

150 160 170 180 190 200 210  
 EELGGGLGVQKQVSLQATFGT----FESILRSSQHK--QDLTEKAVKQGESEVSRISSEVLQKQNEITL--  
 TEL-KKLYCQIAKTCFQIKVMTPPPOGAVIRAMPYKKAHVTEVVKRCPNHELSREFNEGQIAPPSHLIR  
 200 210 220 230 240 250 260

-----KDLSDGIHVVKARERDFTSLVENTVEERLTELTKSINDNIAITFEVQKSKQKEINDMKAKVA  
 VEGNSHAQVEDPITGROSIVLVEPEPQVGTFT-----TVL-YNFMGSSCVGGMNRRPILII-----V  
 270 280 290 300 310 320

280 290 300 310 320 330 340  
 SLESSEGNKODLKALKEAVKEIQTSAKREWMDEALSTLQIMESDIYTEVRELVSLEQEOQAFK-EAADTE  
 TLETRDQ--QVLGRCFEARIACAPSGDRKADDSIRKQVSDSAGKNGDAFRONTHGIIQMTSIRKRSPPDE  
 330 340 350 360 370 380 390

350 360 370 380 390 400 410  
 RLAL-----QALTEKLIRSESEVSRILPEIRRLIEELRQLKSDSHGPKEDGGRHSEAFELQOKSGGDS--  
 LLYLPVGRREYEMILKIKESLELMQYLPQHTIETYRQOQOQH-----QHLQK--HILSAC  
 400 410 420 430 440 450

420 430 440 X 450 460 470 480  
 -RLQHVDEGVLSMQVASAQTESLSLSKSGEHEQRLAPAGALEGGSSEADODGLASTVRSIGETQLVLY  
 FRNELVEPRGEAPQSDVFFRHSKPPNSVYP  
 460 470 480 X

490  
 GDVEELKRSV

5. 833377 (1-601)  
 US-09-538-106-23 Sequence 23, Application US/09538106

Sequence 23, Application US/09538106

GENERAL INFORMATION:

APPLICANT: MCKEON, FRANK

APPLICANT: YANG, ANNIE

APPLICANT: LODA, MASSIMO

APPLICANT: SIGNORETTI, SABINA

APPLICANT: CRUM, CHRISTOPHER

TITLE OF INVENTION: CELL REGULATORY GENES, ENCODED PRODUCTS, AND USES

FILE REFERENCE: HMV-038.02

CURRENT APPLICATION NUMBER: US/09/538.106

PRIOR FILING DATE: 2000-03-29

PRIOR APPLICATION NUMBER: 09/174,493

PRIOR FILING DATE: 1998-10-15

PRIOR APPLICATION NUMBER: 60/087,216

PRIOR FILING DATE: 1998-05-29

PRIOR APPLICATION NUMBER: 60/062,076

NUMBER OF SEQ ID NOS: 53

SOFTWARE: PatentIn Ver. 2.1

SEQ ID NO 23

LENGTH: 461

TYPE: PRT

ORGANISM: Murine sp.

Initial Score = 6 Optimized Score = 58 Significance = 0.00  
 Residue Identity = 18% Matches = 81 Mismatches = 261  
 Gaps = 89 Conservative Substitutions = 0

Sequence 17, Application US/09538106  
 US-09-538-106-17 Sequence 17, Application US/09538106

Sequence 17, Application US/09538106  
 GENERAL INFORMATION:  
 APPLICANT: MCKEON, FRANK  
 APPLICANT: YANG, ANNIE  
 APPLICANT: LODA, MASSIMO  
 APPLICANT: SIGNORETTI, SABINA  
 APPLICANT: CRUM, CHRISTOPHER  
 TITLE OF INVENTION: CELL REGULATORY GENES, ENCODED PRODUCTS, AND USES  
 FILE REFERENCE: HMV-038.02  
 CURRENT APPLICATION NUMBER: US/09/538,106  
 PRIOR FILING DATE: 1998-10-15  
 PRIOR APPLICATION NUMBER: 60/087,216  
 PRIOR FILING DATE: 1998-05-29  
 PRIOR APPLICATION NUMBER: 60/062,076  
 PRIOR FILING DATE: 1997-10-15  
 NUMBER OF SEQ ID NOS: 53

6. s33377 (1-601)  
 US-09-538-106-17 Sequence 17, Application US/09538106

SOFTWARE: PatentIn Ver. 2.1  
 SEQ ID NO 17  
 LENGTH: 461  
 TYPE: PRT  
 ORGANISM: Homo sapiens

Initial Score = 6 Optimized Score = 58 Significance = 0.00  
 Residue Identity = 18% Matches = 82 Mismatches = 255  
 Gaps = 99 Conservative Substitutions = 0

Sequence 22, Application US/09538106  
 US-09-538-106-22 Sequence 22, Application US/09538106

Sequence 22, Application US/09538106  
 GENERAL INFORMATION:  
 APPLICANT: MCKEON, FRANK  
 APPLICANT: YANG, ANNIE  
 APPLICANT: LODA, MASSIMO  
 APPLICANT: SIGNORETTI, SABINA  
 APPLICANT: CRUM, CHRISTOPHER  
 TITLE OF INVENTION: CELL REGULATORY GENES, ENCODED PRODUCTS, AND USES  
 FILE REFERENCE: HMV-038.02  
 CURRENT APPLICATION NUMBER: US/09/538,106  
 PRIOR FILING DATE: 1998-10-15  
 PRIOR APPLICATION NUMBER: 60/087,216  
 PRIOR FILING DATE: 1998-05-29  
 PRIOR APPLICATION NUMBER: 60/062,076  
 PRIOR FILING DATE: 1997-10-15  
 NUMBER OF SEQ ID NOS: 53



```

410      420      430      440      450      460
ALQCKSGDLSRLQHVDDVLSM-QVASARQTE-----SLESLSKSGQHEORLAPAGLBESSEADQDG
|||||
-----TTQGLTTIYQ---IEHYSMDDLASIKIPQFRHAIWKGLDHRQJHE-FSSPSHLRTSPS-----
480      490      500      510      520
LASTV-RSLGETQVLVYGD-VEELKRSVGLPSTVSLQKVQEQVHTLLSDQQAARLPQDFLRLSLSD
|||||
-ASTVSGSSETGGERVIDAVRFTLQOTISFPRDPMDFNFMARAKQQRIRIEGE
530      540      550      560      570      580      590      600
540      550      560      570
NLKASVSQVEADLKMLRTAVDSLVAYSVKIETNENNL

```

## 9. s33377 (1-601) Sequence 13, Application US/09538106

Sequence 13, Application US/09538106

GENERAL INFORMATION:

APPLICANT: MCKEON, FRANK

APPLICANT: YANG, ANNIE

APPLICANT: LODA, MASSIMO

APPLICANT: SIGNORETTI, SABINA

APPLICANT: CRUM, CHRISTOPHER

TITLE OF INVENTION: CELL REGULATORY GENES, ENCODED PRODUCTS, AND USES

FILE REFERENCE: HMV-038.02

CURRENT APPLICATION NUMBER: US/09/538.106

PRIOR FILING DATE: 2000-03-29

PRIOR APPLICATION NUMBER: 09/174.493

PRIOR FILING DATE: 1998-10-15

PRIOR APPLICATION NUMBER: 60/087.216

PRIOR FILING DATE: 1998-05-29

PRIOR APPLICATION NUMBER: 60/062.076

PRIOR FILING DATE: 1997-10-15

NUMBER OF SEQ ID NOS: 53

SOFTWARE: PatentIn Ver. 2.1

SEQ ID NO 13

LENGTH: 641

TYPE: PRT

ORGANISM: Homo sapiens

Initial Score = 6 Optimized Score = 78 Significance = 0.00

Residue Identity = 19% Matches = 113 Mismatches = 341

Gaps = 131 Conservative Substitutions = 0

```

GLNSMDQIQNGSSSTPYNTDHAQNSTVAPSPYAPQSPSTFDALSPSPALPSNTDYGPHSFVVSFOQSST
80      90      100      110      120      130      140
20      30      40      50      60      70      80
EKGA-----HPSGADVAKKPPAPQPPPPAPHPQOHPOQHPQQA--HCKGHRGGGGGGGKSSSS
150      160      170      180      190      200      210
ASASATWYSTEIKLUKCYQIAKTCPTQIKMTPP-----QGANVRAMPVYKKAHEVTVKRCQPNHEL
150      160      170      180      190      200      210
SSASAAAASASASASASASASASASASASASASASASASASASASASASASASASASASASASASASAS
90      100      110      120      130      140
SKEFNEGQIAPPS-----HLIR--VEGNSHAQYEDPITGRQSVLVPYPPQVGEFTTVLVNFMCNSSC
220      230      240      250      260      270

```

```

150      160      170      180      190      200      210
ODFSRQRELL-----GGGLQGVVEKVSLOATFGTFESILRSSQHK---DLTEKAKQGESYSYRS
280      290      300      310      320      330
VGNRRPLILIVITLFTDGVV--GRGCEARICACPGDRKADSDSIRKQVSDST---KNG-----DG

```

```

210      220      230      240      250      260
EVLQKINELKLDSDGI--HYVKDAREDFTSLENTVEERLT--ELTK-----SINDNIATFT-EVQK
|||||
TKAPPRQN-----THGIQKTSIKRRSPDDELIVYVGRFYEYMLIKESLEIMQYLPQHTLETYRQOQ
340      350      360      370      380      390      400
270      280      290      300      310      320
RSQKINDMKAVASLESEGN-KODLKALKEAVKEIQTSAKSREWMALST--LQIMESDIYREVELV
410      420      430      440      450      460
QOQHQLQQTQTSISPSSTSGSSSPFNKNSMKNLPSVQLINPQKRALFTTTPDQGANI-----
410      420      430      440      450      460
330      340      350      360      370      380      390      400
SLKQEQQAFKPADTERLT-ALQALTEKLRSEESVGRLPPEIFRLEERLRQKSDSGPDCDGFHSAFE
470      480      490      500      510      520
--PMMGTHPMAGDMNGLSPTQALPPPL--SWPSTS-----HCTPPPPPTDGSYSLFARIGCSSCLDYF-
470      480      490      500      510      520
ALQCKSGDLSRLQHVDDVLSM-QVASARQTE-----SLESLSKSGQHEORLAPAGLBESSEADQDG
|||||
-----TTQGLTTIYQ---IEHYSMDDLASIKIPQFRHAIWKGLDHRQJHE-FSSPSHLRTSPS-----
530      540      550      560      570      580      590      600
470      480      490      500      510      520      530
LASTV-RSLGETQVLVYGD-VEELKRSVGLPSTVSLQKVQEQVHTLLSDQQAARLPQDFLRLSLSD
|||||
-ASTVSGSSETGGERVIDAVRFTLQOTISFPRDPMDFNFMARAKQQRIRIEGE
590      600      610      620      630      640
540      550      560      570
NLKASVSQVEADLKMLRTAVDSLVAYSVKIETNENNL

```

## 10. s33377 (1-601) Sequence 19, Application US/09538106

US-09-538-106-19 Sequence 19, Application US/09538106

Sequence 19, Application US/09538106

GENERAL INFORMATION:

APPLICANT: MCKEON, FRANK

APPLICANT: YANG, ANNIE

APPLICANT: LODA, MASSIMO

APPLICANT: SIGNORETTI, SABINA

APPLICANT: CRUM, CHRISTOPHER

TITLE OF INVENTION: CELL REGULATORY GENES, ENCODED PRODUCTS, AND USES

FILE REFERENCE: HMV-038.02

CURRENT APPLICATION NUMBER: US/09/538.106

PRIOR FILING DATE: 2000-03-29

PRIOR APPLICATION NUMBER: 09/174.493

PRIOR FILING DATE: 1998-10-15

PRIOR APPLICATION NUMBER: 60/087.216

PRIOR FILING DATE: 1998-05-29

PRIOR APPLICATION NUMBER: 60/062.076

PRIOR FILING DATE: 1997-10-15

NUMBER OF SEQ ID NOS: 53

SOFTWARE: PatentIn Ver. 2.1

SEQ ID NO 19

LENGTH: 680

TYPE: PRT

ORGANISM: Murine sp.

Initial Score = 6 Optimized Score = 79 Significance = 0.00

Residue Identity = 19% Matches = 113 Mismatches = 339

Gaps = 122 Conservative Substitutions = 0

```

GLNSMDQIQNGSSSTPYNTDHAQNSTVAPSPYAPQSPSTFDALSPSPALPSNTDYGPHSFVVSFOQSST
120      130      140      150      160      170      180

```

20  
 EXAA-----HPSGGADVAKKPPAPQPPPPAPHPOOHPOOHQONQ-----HGKGHRGGGGGKSSSS  
 AKSAWTYTELTKLYCOIAKTCPIQIKWTPPP-----QAVIRAMPYKAEHVEVAKCPNHET  
 190 200 210 220 230 240  
 90 100 110 120 130 140  
 SSASAAAAAASSSSCSRRLGRALNFFLYALVAAAAPSGWCNHHVLEVOQV-----RRSH  
 SRFNEGQAPPS-----HLIR--VEGNSHAQYEDDITGROSVLVVEEPPVOGTPTTLYNFMCSNC  
 250 260 270 280 290 300 310  
 150 160 170 180 190 200  
 QDFSRQEEV-----GGGQGVQKQVQSLQATFTFESTIRSSQKODITEKAVQGESEVSRISVYL  
 VGMNRPIIILITLTTRDQVVL--GRCCEPARIACPGDRADEDSIRKQVSDSA--KNG-----DGTKR  
 320 330 340 350 360 370  
 210 220 230 240 250 260  
 OKLONILKDLSDGI--HYVKARERDFTSLENTVEERLT--ELTK-----SINDNIAFT--EVQKRSQ  
 PRON-----THGIQMTSIRKRRSPDDLLIYPVGRRETYEMLKIKESLELMOYLPOHTIETYROQOQOQ  
 380 390 400 410 420 430 440  
 270 280 290 300 310 320 330  
 KEINDWKAVASLESEEN--KODIKALKAEVKEIQTSAKSRMDMALRSTIQTESDITTEVRELVLKOE  
 HGHLOKOTSMOSQSSYGNSSPPLNKMNSMNTLPSVSQILNPOQRNAL--TETTM-----DEGKANIPIW  
 450 460 470 480 490 500  
 340 350 360 370 380 390 400  
 OQAFKKAADTERL--ALQALTEKLRSEESVRLPEIRLRLEBELQKJNSDPREDGFRHSEAFELQOK  
 GTHMPVAGMNGISPTQALPPPL--SMPTS-----HCTPPPPPTDQSVIFFLARLGSSGLDYF-----T  
 510 520 530 540 550 560  
 410 420 430 440 450 460  
 SOGLSRLQHEVEGVLSM--QVASAQTESLESLSK-----SQHEQKLAAPGA--LEGJGSSSED  
 TGGLTITVQ---IEHYSMDLASIKIPEQFRHAIWKGIIDHROLDHDFSPHLLT--TBGASTVSGSEIR  
 570 580 590 600 610 620 630  
 470 480 490 500 X 520 530  
 OQGLASTV--SIGETLVLYGVDEVELKRSVGLPSTVESLQKVOEQVHTLLSQDAQAARLPPOQFLRLSS  
 GERVIDAVRFTLRQITSPPRD--EWNDFNFMDSRNRKQRIKEGE  
 640 650 660 670 680  
 540 550 560  
 LDNLKASVQVEADLKMRLTAVDSL  
 11. s33377 (1-601)  
 US-09-538-106-14 Sequence 14, Application US/09538106  
 Sequence 14, Application US/09538106  
 GENERAL INFORMATION:  
 APPLICANT: MCKEON, FRANK  
 APPLICANT: YANG, ANNIE  
 APPLICANT: LODA, MASSIMO  
 APPLICANT: SIGNORETTI, SABINA  
 APPLICANT: CRUM, CHRISTOPHER  
 TITLE OR INVENTION: CELL REGULATORY GENES, ENCODED PRODUCTS, AND USES  
 FILE REFERENCE: HMV-038.02  
 CURRENT APPLICATION NUMBER: US/09/538.106  
 PRIOR FILING DATE: 2000-03-29  
 PRIOR APPLICATION NUMBER: 09/174,493  
 PRIOR FILING DATE: 1998-10-15  
 PRIOR APPLICATION NUMBER: 60/087,216  
 PRIOR FILING DATE: 1998-05-29  
 PRIOR APPLICATION NUMBER: 60/062,076  
 PRIOR FILING DATE: 1997-10-15

NUMBER OF SEQ ID NOS: 53  
 SOFTWARE: PatentIn Ver. 2.1  
 SEQ ID NO 14  
 LENGTH: 516  
 TYPE: prt  
 ORGANISM: Homo sapiens  
 Initial Score = 5 Optimized Score = 75 Significance = -1.39  
 Residue Identity = 18 Matches = 105 Mismatches = 336  
 Gaps = 127 Conservative Substitutions = 0  
 X  
 MPEAKQ-----RSGKGGHGAASPSSEKA---HPSGGADVAKKPPAPQPP  
 10 X 20 30 40 50 60 70  
 MSQGTQNEPLSPFVPHINDPLEQIPICSVQPIDLNFVDEPSSBDGATNKIEIMDCIRMODSLSDPMPPOY  
 10 X 20 30 40 50 60 70  
 50 60 70 80 90 100 110  
 PPAPHPOOHPOOHPOOHAKHGKGGHGGGGGKSSSS--SSASAAAAAASSSASCSRRLGRALNFFLYLA  
 TNLGLNSMDQO--IQN-----GSSSTSPYNTDHAQNSVTAPSPYADPS--STPDAL--SPSPA  
 80 90 100 110 120  
 120 130 140 150 160 170 180  
 LVAAAAAGNCVHHVLEVOQVRRSHODFSRQREBELGQGLQGVQVSLQATFTG---FESILRSSQHK-  
 IPSNTDYPG--PHSFVDSFOQSSSTAKSATWTYSTEL--KLYCQIAKTCPIQIKWTPPPQAGAIRAMPYKK  
 130 140 150 160 170 180 190  
 190 200 210 220 230 240 250  
 -QDLTEKAVQGESEVSRISVYQKONEL-----KQISDGIHVYKARE---RDT--SIEN  
 200 210 220 230 240 250 260  
 AEHYTEVAKCEPHNELSREFNEQIAPPSHLIRVEGNSHAQYEDDITGROSVLVVEEPPVOGTPTTLYN  
 270 280 290 300 310 320 330  
 -----TVERRLTELTSINDNIAFTVEYOKRQKEINMKAVASLESSENGKQDKALKAEVKEIQTSAK  
 FMCSSCVGGMNRPIIILITLTTRDQVVGRCFE-----ARICAPG--RURKA--DEDSIRKQVSD  
 270 280 290 300 310 320  
 310 320 330 340 350 360  
 SREWDMAALSTLOTWESDIYTEVRELVSFKQQAFFKADTERLAL---QALTEKLRSEESVSRLEPE  
 STKVGDTKAPPRD-----NTGICQMTSIRKRRSPDDLLIYPVGRRETYEMLKIKESLELMOYL  
 330 340 350 360 370 380  
 370 380 390 400 410 420  
 IRLLEELRQLKSDSHGPKEDGGFRHSEAFELQO--KSGGLDS-----RQHVEDGVLSMQVASAR  
 POHTIETYROQOQOQH-----QHLLQKQTSIQSPSSYGNSPPLNKMNSMNTLPSVSQILNPOQRNALT  
 390 400 410 420 430 440 450  
 430 440 450 460 470 480 490 500  
 QTESLESLSKQSEHQEQRILAPAGALBEGJGSSBADQGLASTVRSLSGETQVLVYGVDEVELKRSVGLPSTVES  
 PTTIPDMGANNIMGTHMFMAGDMNGLSPTQALPPPL--SMSTSTCTPPPY-----PTDCSTVRI  
 460 470 480 490 500 510  
 X 510 520 530 540 550  
 LQKVOEQVHTLLSQDAQAARLPPOQFLRLSSLDNLKASVQVEADLKMRLT  
 WQV  
 X  
 12. s33377 (1-601)  
 US-09-538-106-20 Sequence 20, Application US/09538106  
 Sequence 20, Application US/09538106  
 GENERAL INFORMATION:  
 APPLICANT: MCKEON, FRANK



